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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR    | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-------------------------|---------------------|------------------|
| 09/709,009      | 11/08/2000  | Curtiss Mitchell Austin | 13DV13409           | 3123             |

31316 7590 08/26/2003

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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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1731

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                         |                     |  |
|------------------------------|-------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b>  | <b>Applicant(s)</b> |  |
|                              | 09/709,009              | AUSTIN ET AL.       |  |
|                              | <b>Examiner</b>         | <b>Art Unit</b>     |  |
|                              | Christopher A. Fiorilla | 1731                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 16-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 10 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
    If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
    a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
    a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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1. Applicant's election with traverse of Group I in the paper dated 5/27/03 is acknowledged. The traversal is on the ground(s) that the factual explanation presented for the basis of the restriction really isn't on point because if the process assembly were used to process an unsupported article (as alleged by the examiner) then it would be outside the scope of claims 1 and 16. This is not found persuasive because it is maintained that the inventions are distinct. The restriction may have been better stated as group I including a method of producing a process assembly and group II including the process assembly. The process assembly of group II could be made by another and materially different method of making the assembly such as one wherein the assembly is made from a polymeric precursor.

The requirement is still deemed proper and is therefore made FINAL.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,7,8,14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Breslin (5,214,011).

4. Claims 1,1,13,14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Claar (5,011,063).

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-6,8,13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. (4,564,496) in view of Ten Eyck et al. (4,526,826) for the reasons as set forth in the previous office action.

8. Applicant's arguments filed 5/27/03 have been fully considered but they are not persuasive.

**With respect to the rejection of the claims under 35 USC 102 over Breslin applicants argue:**

**Applicant can find no disclosure in Breslin of the following limitation:**

**“positioning the reacted ceramic fixture in relation to the supported article to produce a process assembly; and thereafter processing the process assembly as required for the supported article”**

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**and more generally, no disclosure of the use of the material of Breslin as a fixturing material.**

This argument is not persuasive. Breslin discloses multiple uses for the material produced therein. For example col. 9, lines 13-26 disclose various uses including that of a ceramic filter. If using the material as a ceramic filter the filter would need to be positioned in relation to the supported article to produce a process assembly (i.e. the material being filtered would be introduced into the filter) and then the process assembly would be processed as required (i.e. the filtering would then take place to remove e.g. impurities). Note that these two broad process steps recited above by applicant would be applicable to multiple uses as recited at col. 9, lines 13-26.

**With respect to the rejection of the claims under 35 USC 102 over Claar applicants argue:**

**The approach of Claar does not utilize a sacrificial ceramic fixture precursor to produce an open-cell solid foam, as far as applicant can find.**

This argument is not persuasive. Applicants' attention is directed to col. 5, line 52 which recites the body "may exhibit porosity or voids" and col 6, lines 52-54 which teaches interconnected voids (i.e. and open cell foam) and col. 6, line 46-47 which states "boron carbide is reacted" which is a ceramic fixture precursor.

**Claar produces a bonded structure, which is the opposite of what is desired in fixturing.**

This argument is not commensurate in scope with the claims. The claims do not preclude the production of a bonded structure.

**Applicant can find no disclosure in Claar of the following limitation:  
"positioning the reacted ceramic fixture in relation to the supported article to produce a process assembly; and thereafter  
processing the process assembly as required for the supported article".**

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This argument is not persuasive. Applicant indicates at col. 4, lines 56-58 that "The metal layer in turn can be bonded to a second body such as a ceramic body or a metal body. In order to body the bodies together they clearly are positioned and processed otherwise bonding could not take place.

With respect to the rejection of the claims under 35 USC 103 applicants argue:

**Gupta teaches the infiltration of silicon, but silicon is not a metal, to Applicants' knowledge. Applicant cites references which classify silicon as a "nonmetal". Applicants further ask for support for the implicit suggestion that silicon is a metal.**

This argument is not persuasive. See col. 5, line 56 of the cited Breslin reference which recites "other metals such as...silicon". Thus, it is clear that silicon can also be considered a metal.

**Applicant can find no disclosure in either of the references of the following limitation:**

**"positioning the reacted ceramic fixture in relation to the supported article to produce a process assembly; and thereafter  
processing the process assembly as required for the supported article"  
and more generally, no disclosure of the use of the material of either reference as a fixturing material.**

This argument is not persuasive. Ten Eyck et al. Discloses the steps of producing a Si C foam and impregnating the foam followed by processing the impregnated foam after it is positioned in relation to a wafer to be doped. See Examples 12-14.

9. Claims 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is 703-308-0674. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



**Christopher A. Fiorilla**  
**Primary Examiner**  
**Art Unit 1731**